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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,555	12/12/2003	Thomas W. McGli	FGT 3B3 (203-0149)	2434
36865 7590 02/12/2007 ALLEMAN HALL MCCOY RUSSELL & TUTTLE, LLP 806 S.W. BROADWAY, SUITE 600 PORTLAND, OR 97205			EXAMINER HOANG, JOHNNY H	
			ART UNIT	PAPER NUMBER
			3747	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/734,555	Applicant(s) MEGLI ET AL.	
	Examiner Johnny H. Hoang	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al (US 6,332,446).

Regarding claim 1, the reference of Matsumoto et al discloses an internal combustion engine having solenoid-operated valves and control method including the following subject matters: a controller (ECU 10) configured to:

operate the engine in a first mode where at least both the first cylinder (#3) and second cylinder (#4) open and close at least both their respective intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products (col. 5, line 36 through col. 6, line 52);

operate the engine in a second mode where at least one of the first cylinder and second cylinder opens and closes its intake and exhaust valves to induct air, combust said air with injected fuel, and exhaust combusted gas products, and the other of said first and second cylinders opens and closes at least one of its intake or exhaust valves while maintaining at least the other of its intake or exhaust valves closed during a cycle of the engine (Figs. 3-5, col. 6, line 53 through col. 8, line 31, and above discussions);

operate the engine in a third mode where one of said first and second cylinders operates with at least both intake and exhaust valves closed during a cycle of the engine (above discussions; and col. 9, line 3 through col. 10, line 10); and

selecting at least one of said first, second and third modes based on an operating condition (Fig. 9, col. 10, line 54 through col. 11, line 33, and above discussions).

Regarding claims 2, and 3, the reference of Matsumoto et al also discloses a fuel injection valve 83 mounted in each of the branch pipe (Fig. 1, and col. 5, lines 53-60).

Regarding claims 4-7, as above discussions.

Regarding claim 8, the reference of Matsumoto et al further discloses the distributed processing architecture can be used for maximum data/signal processing capability and speed (col. 13, lines 28-61).

Regarding claim 9, the reference of Matsumoto et al further discloses the engine operating condition is an engine load (col. 8, lines 43-54).

Regarding claims 10, and 11, as above discussions.

Regarding claim 12, the reference of Matsumoto et al further discloses maintaining pressure in deactivated cylinders above crankcase pressure to reduce oil consumption during selected conditions (col. 6, lines 25-39).

Regarding claims 13-14, as above discussions.

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Regarding claims 15-28, see the above rejections

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-9, 11, 13-15, 18-23, 25, and 27-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu (US 6,318,348 B1).

Re claims 1, 3-7, Xu discloses the engine includes at least one combustion chamber defined by a cylinder of a multi-cylinder four-stroke cycle [abstract], controller (30) for controlling exhaust valve actuator (26) and intake valve actuator (25) [Fig. 2], which operating the intake and exhaust valves to induct air, combust air, with injected fuel, and exhaust combusted gas products, maintaining the closing of intake and exhaust valves during a cycle of engine, which is based on an operating condition [col. 7, line 35 through col. 10, line 28].

Re claims 8-9, 11, and 13-14, Xu further discloses the engine operating condition is engine speed or engine load (col. 8, lines 6-12).

Re claims 15, 18-23, 25, and 27-28 are rejected the same as above claims.

6. Claims 1-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Ament (US 6,857,264 B2). Ament discloses a method of operating a second cylinder in a cylinder deactivation mode and a first cylinder carrying out combustion, and during the operation, directly or indirectly injecting fuel into the cylinder, opening and closing of intake and exhaust valves during a cycle of an engine (see col. 3, line 56 through col. 6, line 26).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stockhausen et al (US 6,561,145 B1), and Copus (US 6,435,156 B1).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny H. Hoang whose telephone number is (571) 272-4843.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen K. Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JHH
January 31, 2007


STEPHEN K. CRONIN
SUPERVISORY PATENT EXAMINER

Johnny H. Hoang
Examiner
Art Unit 3747

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12/12/03,6/18/04,7/8/05,11/8/05.